



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/565,907	01/25/2006	Naohide Wakita	289513131	7454
53067 7590 06/11/2008 STEPTOE & JOHNSON LLP 1330 CONNECTICUT AVE., NW WASHINGTON, DC 20036				
EXAMINER				
ROY, SIKHA				
ART UNIT		PAPER NUMBER		
2879				
MAIL DATE		DELIVERY MODE		
06/11/2008		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**Office Action Summary****Application No.**

10/565,907

**Applicant(s)**

WAKITA ET AL.

**Examiner**

Sikha Roy

**Art Unit**

2879

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 25 January 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SF/ICE)
- Paper No(s)/Mail Date 2/28/07
- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Specification***

The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-4, 6, 8, 9 are rejected under 35 U.S.C. 102(e) as being anticipated by USPN6,433,487 to Yamazaki.

Regarding claim 1 Yamazaki discloses (Figs. 1, 2 col. 7 lines 1-52) an organic EL element comprising a substrate 11, a first electrode 44 formed above the substrate, at least at least a surface of the first electrode having a multidimensionally meandering surface shape (textured surface with projecting portions), the surface being opposite to the other surface facing the substrate, an emissive layer including an organic electroluminescent material 46, the emissive layer formed along the surface of the first electrode, the surface of the first electrode having the multidimensionally meandering surface shape, both surfaces of the emissive layer 46 having a multidimensionally

meandering surface shape, one surface of the emissive layer facing the first electrode 44, the other surface of the emissive layer being opposite to the one surface facing the first electrode; and a second electrode 47 formed above the emissive layer.

Regarding claim 2 Yamazaki discloses (Fig. 1) the thickness of the emissive layer 46 is approximately uniform.

Regarding claim 3 Yamazaki discloses (Fig. 2) the multidimensionally meandering surface of the first electrode has a section including an indented shape, the multidimensionally meandering surface being opposite to the other surface facing the substrate, the section being in a direction perpendicular to the substrate and the emissive layer 46 is formed approximately uniformly along the indented shape.

Regarding claim 4 Yamazaki discloses the surface of the second electrode 47 has a multidimensionally meandering surface, the surface being on the side of the emissive layer.

Claim 6 essentially recites the same limitations as claim 1 for the method of fabricating the organic EL element and hence is rejected by Yamazaki (see rejection of claim 1).

Regarding claim 8 Yamazaki discloses (Fig. 1) all the limitations same as of claim 1 and additionally discloses electronic circuit formed (thin film transistors, 201, 202) on the substrate, controlling the light emission from the organic EL element.

Regarding claim 9 Yamazaki discloses (Figs. 1, 3A, 3B) all the limitations same as of claim 1 and additionally discloses voltage application wire formed in the substrate and the EL element connected with the voltage application wire.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 6,433,487 to Yamazaki and further in view of JP 53079 to Manabe et al. (of record).

Regarding claim 5 Yamazaki discloses the multidimensionally meandering surface (textured surface with projecting portions) of the organic electroluminescent element. Yamazaki is silent regarding the actual length and the projected length satisfying the Inequality 1.

Manabe in same filed of endeavor discloses the roughness of the EL surface contacting rough surface of the first electrode results in averaging the interference effect and reduces visual angle dependence. Hence it is notes the more the roughness of the surface the better averaging of interference effect and reduction of visual angle dependence will result.

It has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. Therefore it would be obvious to one of ordinary skill in the art at the time of invention to increase the roughness of the multidimensionally meandering surface (textured surface with projecting portions) of the organic electroluminescent surface of Yamazaki as suggested by Manabe so that the actual

length is more than at least twice the length of the projected length of the surface and satisfy the inequality (for 6 cut sections) for better averaging the interference effect and reduction in visual angle dependence since discovering optimum value of result effective variable is considered within the skill of the art.

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 6,433,487 to Yamazaki as applied to claim 6 above, and further in view of JP 2001338757 to Okada(of record).

Regarding claim 7 Yamazaki does not expressly disclose the organic EL material deposited approximately uniformly along the multidimensionally meandering surface of the first electrode by electrolytic deposition.

Okada in same field of endeavor discloses the organic EL layer is formed by electrolytic deposition method. Okada notes that this method results in formation of uniform organic film over a wide area in an organic EL element having the organic EL layer.

Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to form the organic EL layer of Yamazaki by electrolytic deposition method ad taught by Okada for forming the organic layer uniformly over a wide area.

#### ***Contact Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sikha Roy whose telephone number is (571) 272-2463. The examiner can normally be reached on Monday-Friday 8:00 a.m. – 4:30 p.m.

Art Unit: 2879

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimeshkumar D. Patel can be reached on (571) 272-2457. The fax phone number for the organization is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Sikha Roy/

Primary Examiner, Art Unit 2879